16. Arthritis, Osteoporosis, and Chronic Back Conditions

Goal

Reduce the impact of selective musculoskeletal conditions by lessening their occurrences, activity limitations, and disabilities.

Overview

An increasing number of Americans have focused attention on the prevention and treatment of certain disabling conditions, because they desire to increase the quality and longevity of their lives. Musculoskeletal conditions such as arthritis, osteoporosis, and chronic back pain are all relevant conditions of interest for the public health system.

Arthritis

Arthritis encompasses more than 100 diseases and related conditions. Osteoarthritis, gout, rheumatoid arthritis, and fibromyalgia are among the most common forms of arthritis. Rheumatoid arthritis and lupus are two forms of arthritis that can affect multiple organs and result in widespread symptoms with seriously disabling effects. Kentucky is known to have one of the highest arthritis prevalence rates in the nation. The 2003 Behavioral Risk Factor Surveillance System (BRFSS) data indicate 35 percent of Kentuckians have doctor-diagnosed arthritis and an additional 15 percent have chronic joint symptoms consistent with arthritis. Barriers to care, being overweight or obese, and lack of regular physical activity put many of Kentucky's residents at risk for the development and progression of this disease.

Early diagnosis, consistent medical management, weight control, appropriate levels of regular physical activity and further education through evidence based self-management strategies are essential steps toward reducing the burden of arthritis. Evidence based self-management strategies to improve the functioning of people with arthritis include: Arthritis Foundation Self-Help Programs, Arthritis Foundation Exercise Programs, and Arthritis Foundation Aquatic Programs.

Osteoporosis

Osteoporosis is a disease in which bones become fragile and are more likely to break. If not prevented or if left untreated, osteoporosis can progress painlessly until a bone breaks. These fractures occur typically in the hip, spine, and wrist. Osteoporosis is the most important underlying cause of fractures in the elderly. Although osteoporosis can be defined as low bone mass leading to structural fragility, it is difficult to determine the extent of the condition described in these qualitative terms. Using the World Health Organization's quantitative definition based on bone density measurement, there are roughly 10 million Americans over age 50 with osteoporosis and an additional 34 million

with low bone mass or osteopenia of the hip, which puts them at risk for osteoporosis, fractures, and their potential complications later in life (National Osteoporosis Foundation 2002).

Chronic Back Conditions

Chronic back conditions are common and often debilitating. Annually, back pain occurs in 15-45 percent of individuals, and 70 percent to 85 percent of people report back pain at some time in their lives. Back pain in the United States has been documented as: the most frequent cause of activity limitation for persons under age 45 years, the second most common reason for physician visits, the fifth most common reason for hospitalization, and the third most common reason for surgical procedures (Healthy People 2010).

Summary of Progress

The HK 2010 objectives for arthritis, osteoporosis, and chronic back pain were originally written to mirror the national Healthy People 2010 draft objectives being circulated at the time. The national draft objectives largely relied on national data sets, in particular the National Health Interview Survey. Because there is no comparable surveillance system in Kentucky, it is not possible to measure progress toward many of the objectives for Kentucky. In addition, the arthritis related questions on the BRFSS, including the questions used to measure arthritis prevalence and chronic joint pain have changed since the year 2000, making comparisons across time invalid.

Because of these issues, the objectives for arthritis, osteoporosis and chronic back pain have been revised to align with the surveillance priorities established by the Centers for Disease Control and Prevention's (CDC) Arthritis Program. The new objectives rely on the BRFSS optional arthritis management module and the core arthritis and core quality of life questions.

The state arthritis program was first funded by the CDC in September of 1999. The program receives no state general funds. The state program works with local health departments and the Kentucky affiliate of the Arthritis Foundation to expand the reach of evidence based interventions to improve the ability of Kentuckians to live more comfortably and productively despite the presence of arthritis.

Progress toward Achieving Each HK 2010 Objective

16.1. (Developmental) **Increase mean days without severe pain for Kentucky adults with diagnosed arthritis to more than 20 of the past 30 days. (See Revision)**

16.1R. (REVISION) Decrease the percentage of people with doctor-diagnosed arthritis who report activity limitations because of their arthritis, from 50 percent to 48 percent.

Reason for Revision: This revision reflects the surveillance priorities established by the CDC Arthritis Program.

Data Source: BRFSS optional arthritis management module, to be conducted in odd numbered years to coincide with rotating core questions on arthritis prevalence and quality of life

Baseline: 50 percent in the 2003 BRFSS optional arthritis management module

HK 2010 Target: Decrease to 48 percent

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Increase the number of certified Arthritis Foundation Exercise Program leaders in Kentucky
- Increase the number of Arthritis Foundation Exercise Programs offered across Kentucky
- Increase the number of certified Arthritis Foundation Aquatic Program leaders in Kentucky
- Increase access to indoor heated pools appropriate for offering the Arthritis Foundation Aquatic Programs in Kentucky
- Improve the medical management of arthritis by increasing the number of practicing rheumatologists in Kentucky

16.2. (Developmental) **Reduce to no more than 18.4 percent the proportion of Kentucky adults with diagnosed arthritis who have difficulty in performing two or more personal care activities, thereby preserving independence. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.3. (Developmental) **Reduce the proportion of all Kentuckians with diagnosed arthritis who have difficulty in performing two or more personal care activities, thereby preserving independence. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.4. (Developmental) **Increase the proportion of Kentuckians with diagnosed arthritis aged 18 and older who seek help in coping with personal and emotional problems. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.5. (Developmental) **Increase the proportion of the working age population in Kentucky with diagnosed arthritis who desire to work (i.e., both those who are employed and those who are unemployed but looking for work, the labor force participation rate) to 48 percent. (See Revision)**

16.5R. (REVISION) Decrease the percentage of people with doctor-diagnosed arthritis who report that arthritis impacts their ability, type, or amount of paid work they can perform, from 51 percent to 49 percent.

Reason for Revision: This revision reflects the surveillance priorities established by the CDC Arthritis Program.

Data Source: BRFSS optional arthritis management module, to be conducted in odd numbered years to coincide with rotating core questions on arthritis prevalence and quality of life

Baseline: 51 percent, 2003 BRFSS optional arthritis management module

HK 2010 Target: Decrease to 49 percent

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Increase the number of certified Arthritis Foundation Exercise Program leaders in Kentucky
- Increase the number of Arthritis Foundation Exercise Programs offered across Kentucky
- Increase the number of certified Arthritis Foundation Aquatic Program leaders in Kentucky
- Increase access to indoor heated pools appropriate for offering the Arthritis Foundation Aquatic Programs in Kentucky
- Improve the medical management of arthritis by increasing the number of practicing rheumatologists in Kentucky
- Increase self-management of arthritis by increasing the reach of arthritis self-management educational opportunities in Kentucky

16.6. (Developmental) **Eliminate racial difference in the rate of total knee replacements for severe pain and disability. (DELETED)**

Reason for Deletion: Data not available. Data from the Hospital Inpatient Discharge Database do not include race or ethnicity.

16.7. (Developmental) **Decrease to 15 percent the proportion of Kentucky adults who report they have arthritis but have never seen a doctor for it. (See Revision**)

16.7R. (REVISION) Decrease the percentage of people reporting chronic joint pain who have not seen a doctor for diagnosis, from 52 percent to 50 percent.

Reason for Revision: This revision reflects the surveillance priorities established by the CDC Arthritis Program.

Data Source: BRFSS optional arthritis management module, to be conducted in odd numbered years to coincide with rotating core questions on arthritis prevalence and quality of life

Baseline: 52 percent in 2003

HK 2010 Target: Decrease to 50 percent

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Improve the medical management of arthritis by increasing the number of practicing rheumatologists in Kentucky

16.8. (Developmental) **Increase the early diagnosis and appropriate treatment of individuals with systemic rheumatic diseases. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.9. (Developmental) **Increase the proportion of adults in Kentucky with arthritis who have had effective, evidence based arthritis education (including information about community and self-help resources) as an integral part of the management of their condition. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.10. (Developmental) **Increase the proportion of Kentucky hospitals, managed care organizations, and large group practices that provide effective, evidence based arthritis education (including information about community and self-help resources). (See Revision)**

16.10R. (REVISION) Increase, by 10 percent, the number of certified instructors for the evidence based arthritis education programs: Arthritis Foundation Self-Help Programs, Arthritis Foundation Exercise Programs, and " Arthritis Foundation Aquatic" Programs by 2010.

Reason for Revision: This revision reflects the surveillance priorities established by the CDC Arthritis program.

Data Source: Tracked by the Kentucky Branch of the Arthritis Foundation

Baseline: (2005) Certified Aquatic Program leaders– 77
(2005) Certified Arthritis Foundation Exercise Program leaders– 20
(2005) Certified Arthritis Foundation Self-Help Program leaders– 21
(2005) Certified Support Group leaders– 20

HK 2010 Target: Certified Aquatic Program leaders– 84
Certified Arthritis Foundation Exercise Program leaders– 22
Certified Arthritis Foundation Self-Help Program leaders– 23
Certified Support Group leaders – 22

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Increase the number of opportunities to receive leader certifications in Arthritis Foundation self-management and exercise interventions
- Support local health departments in sending staff for such certifications

16.11. (Developmental) **Increase the proportion of overweight Kentucky adults with arthritis who have adopted some dietary practices combined with regular physical activity to attain an appropriate body weight. (See Revision)**

16.11R. (REVISION) Increase the percentage of adults with arthritis who meet or exceed the recommendations for moderate physical activity, from 28 percent to 30 percent.

Data Source: BRFSS optional arthritis management module, to be conducted in odd numbered years to coincide with rotating core questions on arthritis prevalence and quality of life.

Baseline: 28 percent in 2003

HK 2010 Target: Increase to 30 percent

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Support the many programs to increase moderate physical activity across the state
- Increase participation in Arthritis Foundation approved exercise programs

16.12. (Developmental) **Reduce the prevalence of osteoporosis in Kentucky, as defined by low bone mineral density (BMD), to no more than 8 percent among persons aged 50 and over. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.13. (Developmental) **Increase to 35 percent the proportion of persons in Kentucky over the age of 13 who receive counseling from their health care provider, or school based nutrition programs, or university extension programs about osteoporosis prevention. (See Revision)**

16.13R. (REVISION) Increase the percentage of middle and high schools in Kentucky that teach the importance of including calcium in the diet in their health education courses.

Reason for Revision: To reflect how data are collected in the School Health Profiles

Data Source: CDC School Health Profiles, 2002

Baseline: 86.8 percent in 2002

HK 2010 Target: Increase to 90 percent

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Support coordinated school health programs across Kentucky

16.14. (Developmental) **Increase the proportion of women aged 50 and older in Kentucky, as well as other persons at high risk in the state for osteoporosis, who are counseled about prevention of osteoporosis as well as about appropriate regimens for the treatment of osteoporosis. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.15. (Developmental) **Reduce the prevalence activity limitations due to chronic back conditions to no more than 27 per 1,000 persons in Kentucky. (DELETED)**

Reason for Deletion: There are no data to track this objective, and no data are expected in the near future.

16.16N. (NEW OBJECTIVE) Reduce the rate of hospitalization for vertebral fractures associated with osteoporosis (rate per 10,000 adults aged 65 and older).

Data Source: Hospital Inpatient Discharge Database: ICD (principal diagnosis code 733.12, path Fx Vertebrae)

Baseline: 12.8 per 10,000 in 2001

HK 2010 Target: 11.5 per 10,000

Mid-Decade Status: 14.8 per 10,000 in 2003

Strategies to Achieve Objective:

- Improve education regarding the importance of calcium intake and physical activity for girls and women as preventives for osteoporosis
- Increase early diagnosis of osteoporosis
- Improve medical management of osteoporosis
- Increase participation in Arthritis Foundation approved exercise programs and self-management interventions

16.17N. (NEW OBJECTIVE) Increase the number of practicing rheumatologists in Kentucky by 25 percent.

This objective reflects efforts by the University of Kentucky College of Medicine to establish a residency program for recent medical school graduates desiring to specialize in rheumatology.

Data Source: Review of licensed rheumatologists in Kentucky

Baseline: 35 in 2005

HK 2010 Target: 44

Mid-Decade Status: See baseline

Strategies to Achieve Objective:

- Support the UK College of Medicine in establishment of a residency program in Rheumatology

Terminology

Activity Limitations: Problems in a person's performance of everyday functions, such as communication, self-care, mobility, learning and behavior.

Arthritis: Inflammation of a joint usually accompanied by pain and frequently changes in structure.

Arthritis and Other Rheumatic Conditions: More than 100 conditions (diseases or problems) that primarily affect the joints, muscles, fascia, tendons, and other connective tissues of the body.

Behavioral Risk Factor Surveillance System (BRFSS): A telephone survey that collects health information from adults 18 years of age and older.

Bone Mineral Density (BMD): Measurement used to determine the presence of osteoporosis.

Chronic Back Conditions: Low back pain and other conditions affecting only the back.

Chronic Joint Symptoms: Pain, aching, stiffness, or swelling in or around a joint that was present on most days for at least one month in the past 12 months.

Disability: The reduction of a person's capacity to function in society.

Fibromyalgia: A clinical syndrome characterized by generalized muscular pain and fatigue.

Musculoskeletal Conditions: Conditions affecting the skeleton, joints, muscles, and connective tissues of the body.

Osteoarthritis: A slowly progressive, degenerative joint disease that results from breakdown of cartilage and leads to pain and stiffness; usually affects the knees, hips, and hands; the most common form of arthritis.

Osteopenia: A reduction in bone mass, defined as a BMD between 1.5 to 2 standard deviations below the reference BMD for young adults.

Osteoporosis: A reduction in bone mass and a deterioration of the micro-architecture of the bone leading to bone fragility. More specifically, a BMD below 2.5 standard deviations of the reference BMD for young adults is indicative of osteoporosis.

Rheumatoid Arthritis: A chronic inflammatory disease of the body that produces its most prominent manifestations in joints, often leading to joint pain, stiffness, and deformity.

Rheumatologist: A physician who specializes in the treatment of arthritis and other rheumatic conditions.

References

- Schneider EL, Guralnik JM. The aging of America: Impact on health care costs. JAMA 1990 May 2; 263 (17): 2335-40.
- U.S. Department for Health & Human Services. Healthy People 2010 (chap.2) Retrieved June 29, 2005 from http://healthypeople.gov/document/html/volume1/02/arthritis.htm
- U.S. Department for Health & Human Services. Healthy People 2010 Progress Review Retrieved June 29, 2005 from http://www.healthypeople.gov/data/2010/focus02/

Contributors

- Patricia Hinson, RN, Coordinator, Arthritis Program, Chronic Disease Prevention and Control Branch, Department for Public Health, Chapter Coordinator
- Teri Wood, PhD, Epidemiologist, Chronic Disease Prevention and Control Branch, Department for Public Health
- Leslie Crofford, M.D. Professor of Internal Medicine; Chief, Division of Rheumatology; Gloria W. Singletary Chair and Director, Women's Health Program; University of Kentucky College of Medicine
- Jo Ann Oliver, Health Outreach Coordinator; Arthritis Foundation, Louisville Branch, Ohio River Valley Chapter

16. Arthritis, Osteoporosis and Chronic Back Pain – Summary Tables

Summary of Objectives for Arthritis, Osteoporosis, and Chronic Back Pain	Baseline	HK 2010 Target	Mid-Decade Status	Progress	Data Source
16.1R. Decrease the percentage of people with doctor diagnosed arthritis who report activity limitations because of their arthritis, from 50 percent to 48 percent.	50% (2003)	≤48%	50% (2003)	N/A	BRFSS
16.2. – 16.4. (DELETED)					
16.5R. Decrease the percentage of people with doctor diagnosed arthritis who report that arthritis impacts the ability, type, or amount of paid work they can perform, from 51 percent to 49 percent.	51% (2003)	≤49%	51% (2003)	N/A	Optional Arthritis module on BRFSS
16.6. (DELETED)					
16.7R. Decrease the percentage of people reporting chronic joint pain who have not seen a doctor for diagnosis, from 52 percent to 50 percent.	52% (2003)	≤50%	52% (2003)	N/A	Optional Arthritis module on BRFSS
16.8. – 16.9. (DELETED)					
16.10R. Increase by 10 percent, the number of certified instructors for the evidence-based arthritis education programs: Arthritis Foundation Self Help (ASH) courses, Arthritis Foundation Exercise Programs (AFEP), and Arthritis Foundation Aquatics courses by 2010.	Aquatics: 77 (2005)	≥84	77 (2005)	N/A	As compiled by the KY Arthritis Foundation
	AFEP: 20 (2005)	≥22	20 (2005)	N/A	
	ASH: 21 (2005)	≥23	21 (2005)	N/A	
	Support Group: 20 (2005)	≥22	20 (2005)	N/A	
16.11R. Increase the percentage of adults with arthritis who meet or exceed the recommendations for moderate physical activity, from 28 percent to 30 percent.	28% (2003)	≥30%	28% (2003)	N/A	Optional Arthritis module on BRFSS
16.12. (DELETED)					
16.13R. Increase the percentage of middle and high schools in Kentucky that teach the importance of including calcium in the diet in their health education courses.	86.8% (2002)	≥90%	86.8% (2002)	N/A	SHEP
16.14. – 16.15 (DELETED)					

Summary of Objectives for Arthritis, Osteoporosis, and Chronic Back Pain	Baseline	HK 2010 Target	Mid-Decade Status	Progress	Data Source
16.16N. Reduce the rate of hospitalization for vertebral fractures associated with osteoporosis (rate per 10,000 adults aged 65 and older).	12.8/ 10,000 (2001)	≤11.5/ 10,000	14.8/ 10,000 (2003)	No	HOSP
16.17N. Increase the number of practicing rheumatologists in Kentucky by 25%.	35 (2005)	≥44	35 (2005)	N/A	Survey of Medical Board of Licen-sure

R = Revised objective, N = New objective
N/A = Only baseline data are available. Not able to determine progress at this time.